In The Claims:

A mobile wireless communication system 1 for a variety of different mobile user types, 2 comprising: 3 individual transponding plurality\ of 4 nodes; 5 a plurality of individual resource cells 6 each associated with a particular one of 7 plurality of transponding nodes and one 8 plurality of available CDMA codes; and 9 a plurality of mobile terminals, each of 10 which is assigned to operate in one or more of said 11 plurality of individual resource cells; 12 said plurality wherein each \of of 13 individual resource cells is assigned to at most one 14 of said plurality of mobile terminals at any one 15 time. 16

Sul

1 2. The system of claim 1, further 2 comprising:

a central processing hub, which establishes
links to one or more of said users through one or
more of said plurality of transponding nodes wherein
the specific transponding node and codes used to
complete each of said links is determined by the
resource cells assigned to the user;
wherein said central processing hub pre-

10 processes signals for forward link transmission such

ľU

63

that they are kadiated with compensating time delays 11 to an intended $\delta_{\rm ne}$ of said plurality of mobile users 12 who coherently receives all such signals intended for 13 him; 14 wherein said central processing hub post-15 processes received signals to introduce compensating 16 time delays such that\ all such signals received from 17 a particular remote user may be coherently processed 18

The system of claim 1, wherein each of 1 said plurality of individual transponding nodes is 2 independently selected from one of the following 3 a space-based system, a high altitude system types: 4 platform system, a tower based cellular network, or a 5 manned/unmanned aircraft. 6

system of claim 2, wherein at 1 least one said plurality of mobile terminals 2 assigned resource cells in platform-code space for 3 from 4 said return link that are \different resource cells in platform-code space assigned for 5 said forward link. 6

The system of claim 3, wherein said 1 high altitude platform system is comprised of a 2 plurality of manned/unmanned airships. 3

6. The system of claim 3, wherein said 1 high altitude platform system is comprised of a 2 plurality of high altitude balloons. 3

together.

19

18

19

ľIJ

```
The system of claim 3, wherein said
1
   plurality of individual transponder nodes are all of
2
   the same type.
3
                  The system of claim 3, wherein said
1
   plurality of individual dransponder nodes are not all
2
   of the same type.
3
                  A method fdr establishing a plurality
1
   of communication links to a plurality of different
2
3
   users, comprising:
             providing
                             plurality
                                          of.
                                               individual
4
                         a
   transponding nodes;
5
                             plurality
                                              local
             processing
                                         οf
                                                     user
6
                          a
                              hub
                                         compensate
7
   signals
             at
                  a
                      ground
                                   to
                                                      for
   differential propagation delays to any one of a
8
   plurality of remote users;
9
             assigning each of said plurality of remote
10
   users one or more resource cells in platform-code
11
12
   space;
             wherein said resource cells assigned to a
13
   user for use on the forward link may or not be the
14
   same as those assigned for use on the return link;
15
             wherein each resource \cell assigned to a
16
   particular user enables him to transmit signals to or
17
```

from the hub through a particular transponder node

using a particular CDMA code.

```
10. The method of claim 9, wherein at
2 least one of said plurality of transponder nodes is
3 selected from a high altitude platform system.
```

- 1 11. The method of claim 10, wherein said 2 high altitude platform system includes a plurality of 3 manned/unmanned airships.
- 1 12. The method of claim 10, wherein said 2 high altitude platform system is comprised of a 3 plurality of high altitude balloons.
- 1 13. The method of claim 9, wherein at 2 least one of said plurality of transponder nodes is 3 selected from a tower based cellular network.
- 1 14. The method of claim 10, wherein at 2 least one of said plurality of transponder nodes is 3 selected from a space based system.
- 1 15 A mobile wireless communication system 2 for a variety of different mobile user types, 3 comprising:
- a plurality of individual transponder nodes, each having an established link with a ground hub;
- a plurality of individual resource cells

 8 each associated with one of said plurality of

 9 transponder nodes and one of a plurality of codes;

 10 and

a plurality of remote users having an established link with said ground hub, and each being assigned one or more of said plurality of individual resource cells in code-platform space.

1 16. The system of claim 15, wherein each 2 of said plurality of individual transponder nodes is 3 selected from among the following platforms: a 4 space-based system, a tower-based cellular network, a 5 manned/unmanned aircraft or a high altitude platform 6 system.

1 17. The system of claim 16, wherein said 2 high altitude 'platform system is comprised of a 3 plurality of manned/unmanned airships.

1 18. The system of claim 16, wherein said 2 high altitude platform system is comprised of a 3 plurality of high altitude balloons.

19. The system of claim 16, wherein said 2 plurality of individual transponder nodes are 3 selected from the same platform.

1 20. The system of claim 16, wherein said 2 plurality of individual transponder nodes are 3 selected from at least two of the platforms.

1 21. The system of claim 16, wherein said 2 ground hub pre-processes signals for forward link 3 transmission and post-processes signals for return 4 link reception. 22. The system of claim 21, wherein at least one of said plurality of mobile terminals is assigned resource cells in platform-code space for said return link that are different from those assigned for said forward link.